



installation and operation instructions

MECHANICAL AIR CLEANER

MACA

Cancels: New

II MACA-12-1
3-98


NOTE: Read the entire instruction manual before starting the installation.

SAFETY CONSIDERATIONS

Installation and service of heating and air conditioning equipment can be hazardous due to system pressure and gas and electrical components. Only trained and qualified personnel should install, repair, or service heating and air conditioning equipment.

Untrained personnel can perform basic maintenance functions such as cleaning and replacing air filters. All other operations must be performed by trained service personnel. When working on heating and air conditioning equipment, observe precautions in the literature, tags, and labels attached to or shipped with the unit and other safety precautions that may apply.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloth for brazing operations. Have fire extinguisher available. Read these instructions thoroughly and follow all warning or cautions attached to the unit. Consult local building codes and National Electrical Code (NEC) for special requirements.

It is important to recognize safety information. This is the safety-alert symbol . When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies hazards which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **would** result in minor personal injury or product and property damage.

INTRODUCTION

The Model MACA Efficient Mechanical Air Cleaner is designed for installation in the return-air duct system of any forced-air heating and/or cooling system. The model MACA Mechanical Air Cleaners are available in three sizes, 1200, 1400, and 2000 CFM.

The Model MACA is a mechanical air cleaner incorporating special pleated filter media designed to remove dirt, dust, pollen and other microscopic particles from the air passing through it. The pleats provide an exceptionally large filtering face area in a very compact space which allows maximum dirt holding capacities with minimum air flow resistance. (See Table 1.)

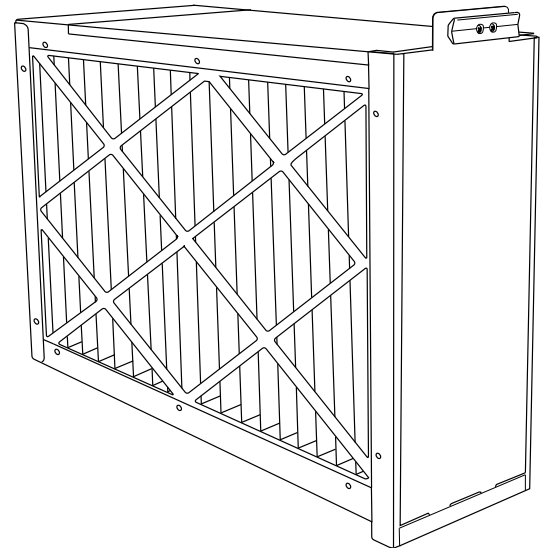
INSTALLATION

I. INSTALL AIR CLEANER CABINET IN RETURN-AIR SYSTEM



CAUTION: Turn OFF the electrical supply to the furnace or air handler before beginning installation.

1. Remove and discard existing furnace or air handler filter(s).
2. Referring to Fig. 2 and 3 for air cleaner dimensions and typical installations, determine best installation location of air cleaner.



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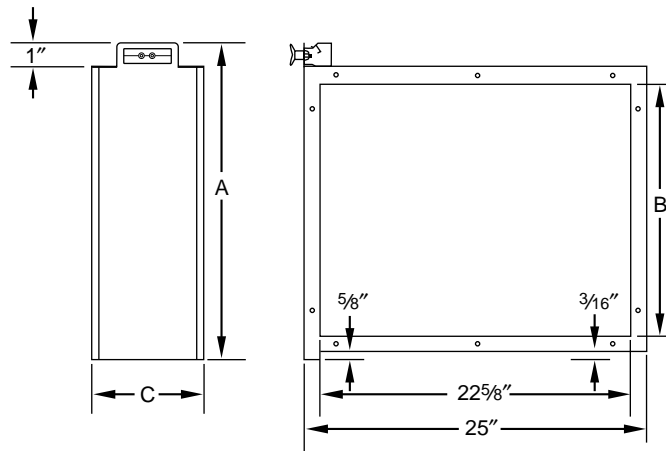
Fig. 1—Model MACA Mechanical Air Cleaner

TABLE 1—AIR CLEANER PRESSURE DROP

| SIZE | 12 | 14 | 20 |
|---------------|---------------------|-------|-------|
| Airflow (CFM) | Resistance (In. wc) | | |
| 600 | 0.055 | 0.045 | 0.04 |
| 800 | 0.08 | 0.06 | 0.05 |
| 1000 | 0.12 | 0.115 | 0.09 |
| 1200 | 0.16 | 0.16 | 0.115 |
| 1400 | — | 0.23 | 0.15 |
| 1600 | — | — | 0.18 |
| 1800 | — | — | 0.22 |
| 2000 | — | — | 0.27 |

NOTE: A 26-in. clearance must be allowed for removal of the media assembly from the air cleaner cabinet.

3. Using standard practices, remove a section of return-air duct to allow installation of air cleaner cabinet.
4. Install air cleaner in duct opening. (Use a transition if openings are different).
5. Mounting holes are provided for duct work attachment. (See Fig. 2). If adjoining duct work is flanged, install screws so that their heads are inside cabinet to prevent damage to filter during removal and installation.
6. Remove media filter from plastic bag and place media filter in cabinet. Directional arrows on filter cartridge must point in direction of air flow.
7. After unit has been secured, seal seams air tight with duct tape or caulking.
8. Reinstall cabinet front panel door assembly.



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TABLE 2—DIMENSIONS

| MODEL | A | B | C |
|--------------|--------|--------|-------|
| MACAXCBBX012 | 18-1/8 | 13-3/4 | 5-1/4 |
| MACAXCBBX014 | 18-1/8 | 13-3/4 | 7-1/4 |
| MACAXCBBX020 | 22-1/8 | 17-3/4 | 7-1/4 |

Fig. 2—Dimensional Drawing

NOTE: The air cleaner is set up for left to right air flow, when facing the access door. For right to left air flow, remove filter cartridge, turn it around and replace in cabinet. Directional arrows on filter cartridge must point in direction of air flow. (See Fig. 3 for typical installations.)

II. MAINTENANCE

1. The filter in your mechanical air cleaner must be replaced periodically. The frequency of filter replacement is best determined by visual examination.

Periodic inspection and annual replacement of your filter will insure high efficiency air cleaning.

III. REPLACING FILTER MEDIA IN AIR CLEANER CABINET

1. Turn off power to furnace or air handler before removing door.
1. Open access door by pulling handle. Remove door completely.
2. Pull used filter straight out of cabinet.
3. Slide new filter cartridge into cabinet with "AIR-FLOW" arrow pointing in direction of air flow.
4. Replace door.
5. Turn power on.

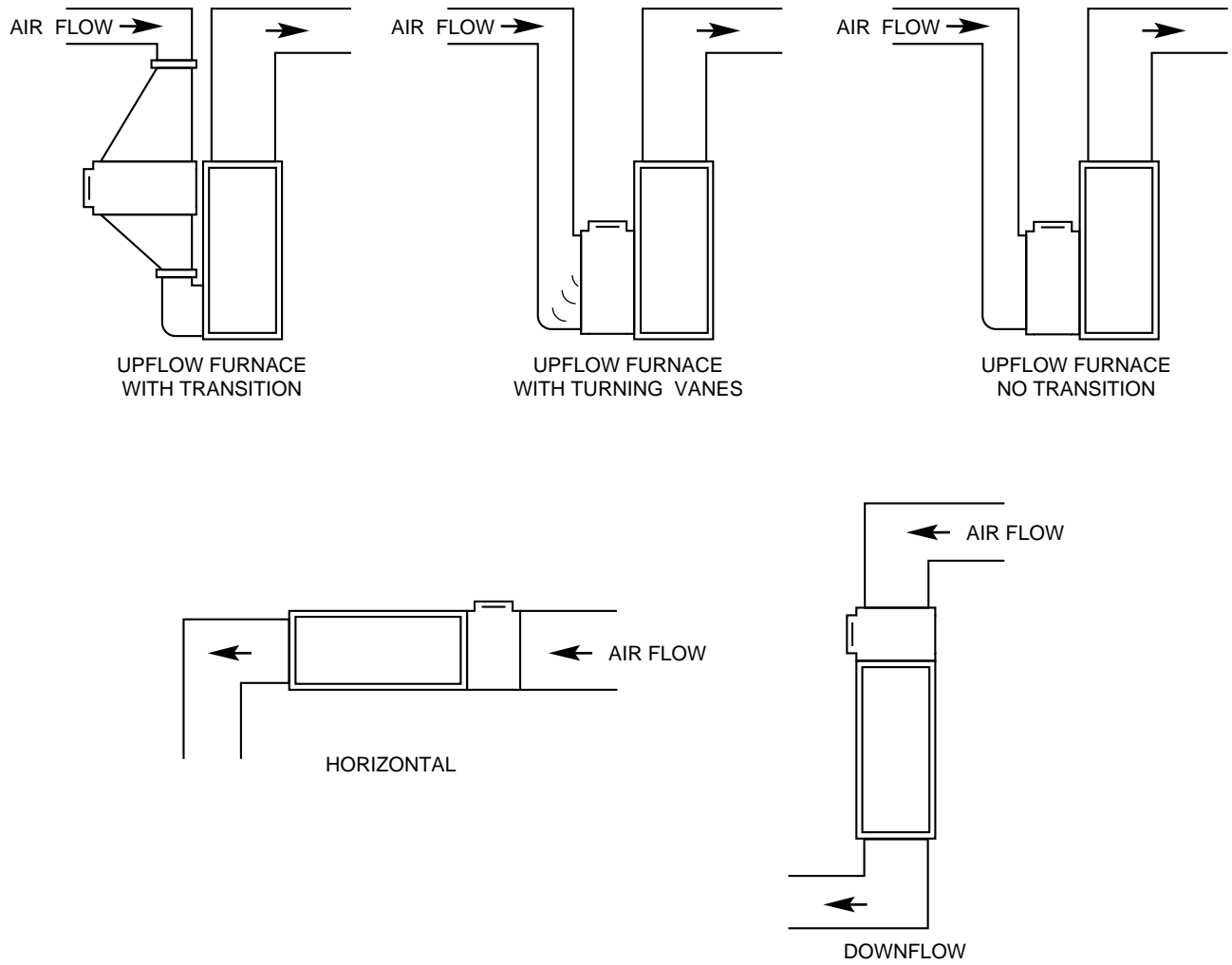


Fig. 3—Typical Installations

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SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

Classroom Service Training plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

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